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10/825,775

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Faith T. Chandler

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05/12/2006

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EXAMINER

BUSS, BENJAMIN J

ART UNIT

PAPER NUMBER

2129

DATE MAILED: 05/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/825,775	Applicant(s) CHANDLER ET AL.	
	Examiner Benjamin J. Buss	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/15/2004 and 12/19/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 19-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/26/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claims 1-69 are pending.

- Claims 1-18 have been elected by Applicant without traverse and have been examined in this First Office Action on the Merits.

- 5
- Claims 19-69 have been withdrawn from consideration without prejudice.

Priority

Examiner acknowledges Applicant's claim for priority based on 60/479,696 filed on 6/18/2003.

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Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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Claims 1-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The computer system must set forth a practical application of that §101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77. The invention is ineligible because it has not been limited to a substantial practical application. The invention is a mere abstract manipulation of data that does not

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produce a useful, concrete, and tangible result, so it is useless in a real world situation.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete. If the claim is directed to a practical application of the §101 judicial exceptions producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. §101.

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The phrases 'describing the human activity using at least one verb' and 'to identify appropriateness of correction measures' are not clear in purpose or scope. The claim describes the manipulation of abstract data, disclosed as non-functional descriptive material.

The invention must be for a practical application and either:

- 1) specify transforming (physical thing – article) or

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30 2) have the Final Result (not the steps) achieve or produce a
 useful (specific, substantial, AND credible),
 concrete (substantially repeatable/non-unpredictable), AND
 tangible (real world/non-abstract) result
 (tangibility is the opposite of abstractness).

35 A claim that is so broad that it reads on both statutory and non-statutory subject matter must be amended,
and if the specification discloses a practical application but the claim is broader than the disclosure such that it does
not require the practical application, then the claim must be amended.

 Claims that identify data, perform abstract manipulations of the data, and compare the calculated value to a
threshold are not statutory. Merely identifying corrective measures is not the same as actually implementing
40 corrective measures and it is not clear what the method does with this abstract information once it has been
identified.

 Appropriate corrections are required.

Claim Rejections - 35 USC § 102

45 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections
under this section made in this Office action:

 A person shall be entitled to a patent unless –
 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
50 sale in this country, more than one year prior to the date of application for patent in the United States.

 Claims 1-2 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sogg** ("An Integrated Systems
Approach to Human Factors in Commercial Aviation Maintenance Systems")

Claim 1:

55 **Sogg** teaches:

- Identifying at least one task involved in the process, the task including at least one human activity (p1-7
especially "human activity throughout the maintenance system" p2 and "maintenance operations" p3 and
"Job/task" p6; Also see "Job/Task" in Figure 1);

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- Describing the human activity using at least one verb (p1-7 especially "human activity throughout the maintenance system" p2 and "maintenance operations" p3 and "Job/task" p6; Also see "Job/Task" in Figure 1; *It is clear that the tasks associated with maintenance would be described using verbs*);
- Automatically identifying a human error potentially resulting from the human activity, the human error potentially resulting from the human activity being related to the verb used in describing the task (p1-7 especially "human error" p3 and "job related hazards" p6);
- Identifying a likelihood of occurrence of the human error (p1-7 especially "error probability" p3);
- Identifying a likelihood of correction of the human error (p1-7 especially "conditions within the maintenance system that increase the possibility of error" p3 and "effect other system components have on the human's ability to do his/her job" p2 and "those performance shaping factors that resulted in the original error must be addressed before the risk of the maintenance error can be effectively managed" p4);
- Identifying a potential severity of an effect of the human error (p1-7 especially "potential outcome" p3);
- Automatically calculating a risk of potential harm from the likelihood of occurrence of the human error, the likelihood of correction of the human error, and the potential severity of the effect resulting from the human error (p1-7 especially "relative significance of the error" p3 and "risk assessments" p6); and
- Comparing the risk of potential harm with a risk threshold to identify appropriateness of corrective measures to one of reduce or eliminate the risk of the potential harm resulting from the human error (p1-7 especially "most cost effective approach to managing it" p3 and "error tolerance" p4).

As used in the claims, the terms "human" and "verb" are non-functional descriptive material that does not further limit the claim.

80 Claim 2:**Sogg anticipates:**

- Wherein identifying the task includes identifying a human-system interface (p1-7 especially "human-system interface" p2).

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85 **Claim 16:**

Sogg anticipates:

- Identifying a recommendation that one of prevents the human error, allows mitigation the effect of the human error (p1-7 especially "mitigating a risk factor" p5), allows detection of the human error, and allows correction of the human error prior to the occurrence of the human error.

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Claim 17:

Sogg anticipates:

- Determining which of a plurality of potential human errors should have a recommendation to change the risk and which of the plurality of potential human errors requires no further action (p1-7 especially "which potential error poses the most significant risk to the system and what is the most cost effective approach to manage it" p3 and "the most effective solution at the system level might be to allow the error rates to remain the same but increase the error tolerance of the system" p4).

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Claim Rejections - 35 USC § 103

100 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1, 7-9, 11-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art in the "Background of the Invention" in the specification of the instant application (page 2 line 1 – page 2

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line 18), hereinafter referred to as the **admission**, in view of **Al-Shihabi** ("A Framework for Modeling Human-like Driving Behaviors for Autonomous Vehicles in Driving Simulators")

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Claim 1:

The **admission** teaches a method for performing human factors process failure modes and effects analysis for a process, the method comprising:

- Identifying at least one task involved in the process, the task including at least one human activity ("tasks" p2 L11 – p3 L15);
- Describing the human activity using at least one verb ("verb" p2 L11 – p3 L15);
- Automatically identifying a human error potentially resulting from the human activity, the human error potentially resulting from the human activity being related to the verb used in describing the task ("analyzes each task in a process to identify potential human errors" p2 L11 – p3 L15);
- Identifying a likelihood of occurrence of the human error ("likelihood of the errors" p2 L11 – p3 L15);
- Identifying a likelihood of correction of the human error ("likelihood based on barriers and controls" p2 L11 – p3 L15);
- Identifying a potential severity of an effect of the human error ("worst-case" p2 L11 – p3 L15);
- Automatically calculating a risk of potential harm from the likelihood of occurrence of the human error, the likelihood of correction of the human error, and the potential severity of the effect resulting from the human error ("likelihood of the worst-case effects on a system" p2 L11 – p3 L15); and
- Identifying appropriateness of corrective measures to one of reduce or eliminate the risk of the potential harm resulting from the human error ("identifies recommendations to avoid the occurrence of errors or to reduce any harm the errors may cause" p2 L11 – p3 L15).

*As used in the claims, the terms "human" and "verb" are non-functional descriptive material that does not further limit the claim, but the **admission** does meet the terminology of the claim.*

The **admission** fails to explicitly teach:

- Comparing the risk of potential harm with a risk threshold.

Al-Shihabi teaches:

- Identifying at least one task involved in the process, the task including at least one human activity (p286-291 especially "driving task" §2);
- Describing the human activity using at least one verb (p286-291 especially "driving" §2);

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- 140 - Automatically identifying a human error potentially resulting from the human activity, the human error potentially resulting from the human activity being related to the verb used in describing the task (p286-291 especially "safety" §2; *Described as being conflict with efficiency*);
- Automatically calculating a risk of potential harm from the likelihood of occurrence of the human error, the likelihood of correction of the human error, and the potential severity of the effect resulting from the human error (p286-291 especially "level of risk" §2); and
- 145 - Comparing the risk of potential harm with a risk threshold to identify appropriateness of corrective measures to one of reduce or eliminate the risk of the potential harm resulting from the human error (p286-291 especially "Risk-threshold models generally apply risk-compensation mechanisms if the threshold of risk is exceeded" §2).

150 Motivation:

The **admission** and **Al-Shihabi** are from the same field of endeavor, management of risk. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of the **admission** by comparing the level of risk to a risk threshold as taught by **Al-Shihabi** for the benefit of maximizing expected utility since a rational person out to pay no attention to very small chances (§2.2, **Shrader-Frechette** "Technological Risk and Small Probabilities") and also since a risk probability-threshold is economically necessary and desirable because the cost of not recognizing such a cut-off point often exceed those of recognizing it (§2.1, **Shrader-Frechette**).

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Claim 7:160 The **admission** teaches:

- Wherein identifying the potential severity of the human error includes identifying a worst-case effect of the human error such that the risk of potential harm includes a risk of a worst-case effect of human error ("worst-case" p2 L11 – p3 L15).

165 **Claim 8:**The **admission** teaches:

- Identifying mechanisms that allow at least one of detection ("identify human errors" p2 L11 – p3 L15), correction ("avoid the occurrence of errors or to reduce any harm the errors may cause" and "eliminate the

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errors or mitigate their effects” and “accommodate the limitations of personnel to produce safe, productive and comfortable use” p2 L11 – p3 L15), and prevention (“avoid the occurrence of errors or to reduce any harm the errors may cause” and “eliminate the errors or mitigate their effects” and “accommodate the limitations of personnel to produce safe, productive and comfortable use” p2 L11 – p3 L15) of the human error prior to the worst-case effect occurring.

Claim 9:The **admission** teaches:

- Automatically identifying a performance-shaping factor for the human error that changes the likelihood that the human error will occur, the performance-shaping factor being related to the human activity involved in the task (“factors that contribute to the likelihood that the error would occur” p2 L11 – p3 L15).

Claim 11:The **admission** teaches:

- Identifying at least one barrier directed to preventing the occurrence of the human error (“barriers” p2 L11 – p3 L15).

Claim 12:The **admission** teaches:

- Recalculating the risk of potential harm to include an effect of the barrier in preventing the occurrence of the human error (“likelihood based on barriers” p2 L11 – p3 L15).

Claim 13:The **admission** teaches:

- Identifying at least one control directed to mitigating the effect of the human error (“controls” and “mitigate their effects” and “reduce and harm they may cause” and “recommendations” p2 L11 – p3 L15).

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Claim 14:

The **admission** teaches:

- Recalculating the risk of potential harm to include an effect of the control in mitigating the effect of the human error ("likelihood based on barriers and controls" p2 L11 – p3 L15).

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Claim 15:

The **admission** teaches:

- Recalculating the risk of potential harm to include human error probability data ("likelihood of the errors" and "risk assessment" p2 L11 – p3 L15).

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Claim 16:

The **admission** teaches:

- Identifying a recommendation that one of prevents the human error, allows mitigation the effect of the human error, allows detection of the human error, and allows correction of the human error prior to the occurrence of the human error ("identifies recommendations to avoid the occurrence of errors or to reduce any harm the errors may cause" and "identifying potential human errors, prior to system fabrication, so that designs may be modified to eliminate the errors or mitigate their effects" p2 L11 – p3 L15).

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Claim 18:

The **admission** teaches:

- Generating at least one of a report and a table collecting results of the human factors process failure modes and effects analysis and risk assessment ("HF PFMEA tables" p2 L11 – p3 L15).

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Claim Rejections - 35 USC § 103

220 Claims 3-5, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art in the "Background of the Invention" in the specification of the instant application (page 2 line 1 – page 2 line 18), hereinafter referred to as the **admission**, in view of **Al-Shihabi** ("A Framework for Modeling Human-like Driving

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Behaviors for Autonomous Vehicles in Driving Simulators”), further in view of **Eiff** (“At-Risk Safety Metric: A Proactive Safety Measurement Strategy”).

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Claim 3:

The combination of the **admission** and **Al-Shihabi** fails to teach:

- Using a potential human error database.

Eiff teaches:

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- Wherein the human error identified is derived from a potential human error database associating potential human errors with verbs useable describing the human activity involved in the task (p1-14 especially “No UAL approved hearing protection used” and “Inappropriate wands used” p11-12).

Motivation:

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Eiff and the combination of the **admission** and **Al-Shihabi** are from the same field of endeavor, management of risk. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of the **admission** and **Al-Shihabi** by having a potential human error database describing potential human errors with verbs useable describing the human activity involved in the task as taught by **Eiff** for the benefit of real-time assessment of “at-risk” worker behaviors and operational safety levels (**Eiff** p5) to identify the most common sources of error and to trend the safety level over time to show progress (**Eiff** p7) and also to keep workers & management focused on safety, reduce equipment damage and personal injuries, and improve productivity (**Eiff** p14) and to promote targeted interventions (**Eiff** p5).

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Claim 4:

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The combination of the **admission** and **Al-Shihabi** fails to teach:

- Presenting an error list.

Eiff teaches:

- Wherein a plurality of human errors associated with the verb used in describing the human activity is presented in an error list (p1-14 especially “FOD walk not performed” and “Proper chocks not used

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250 immediately after blocked" and "Checklists" p9-10 and "FOD walk not performed" and "AMT not on gate/hanger for arrival" and "Fire extinguishers obstructed" p13).

Motivation:

Eiff and the combination of the **admission** and **Al-Shihabi** are from the same field of endeavor, management of risk. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of the **admission** and **Al-Shihabi** by presenting an error list of errors associated with the verb used in describing the human activity as taught by Eiff for the benefit of real-time assessment of "at-risk" worker behaviors and operational safety levels (Eiff p5) to identify the most common sources of error and to trend the safety level over time to show progress (Eiff p7) and also to keep workers & management focused on safety, reduce equipment damage and personal injuries, and improve productivity (Eiff p14) and to promote targeted interventions (Eiff p5).

Claim 5:

The combination of the **admission** and **Al-Shihabi** fails to teach:

- Calculating a risk priority number.

265 Eiff teaches:

- Performing a screening of potential human errors by automatically calculating a risk priority number, below which the potential human error will not be further analyzed (p1-14 especially "Compiling the data produces a graph of the top three safety infractions for each workgroup" p13; *The screening assigns priority to the top three risks presented, and does not further consider the other potential human errors*).

270 Motivation:

Eiff and the combination of the **admission** and **Al-Shihabi** are from the same field of endeavor, management of risk. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of the **admission** and **Al-Shihabi** by screening out the top three errors for further analysis as taught by Eiff for the benefit of real-time assessment of "at-risk" worker behaviors and operational safety levels (Eiff p5) to identify the most common sources of error and to trend the safety level over time to show progress (Eiff p7) and also to keep workers & management focused on

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safety, reduce equipment damage and personal injuries, and improve productivity (Eiff p14) and to promote targeted interventions (Eiff p5).

280 **Claim 10:**

The combination of the **admission** and **Al-Shihabi** fails to teach:

- A performance-shaping factor list.

Eiff teaches:

- Wherein a plurality of performance-shaping factors is presented in a performance-shaping factor list from
285 which a user can select at least one performance-shaping factor that changes the likelihood that the potential human error will occur (p1-14 especially "Root Causes" p10 and "Not Following Procedure" and "Incompatible Goals" p10-13).

Motivation:

Eiff and the combination of the **admission** and **Al-Shihabi** are from the same field of endeavor,
290 management of risk. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of the **admission** and **Al-Shihabi** by presenting a list performance-shaping factors that change the likelihood the human error will occur as taught by Eiff for the benefit of real-time assessment of "at-risk" worker behaviors and operational safety levels (Eiff p5) to identify the most common sources of error and to trend the safety level over time to show progress (Eiff p7)
295 and also to keep workers & management focused on safety, reduce equipment damage and personal injuries, and improve productivity (Eiff p14) and to promote targeted interventions (Eiff p5).

Claim 17:

The combination of the **admission** and **Al-Shihabi** fails to explicitly teach:

- 300 - Determining which of the plurality of potential human errors requires no further action.

Eiff teaches:

- Determining which of a plurality of potential human errors should have a recommendation to change the risk and which of the plurality of potential human errors requires no further action (p1-14 especially "Compiling the data produces a graph of the top three safety infractions for each workgroup" p13;

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305 *Interventions are targeted at the top three risks as posing the most immediate danger, while lower priority risks are currently ignored).*

Motivation:

Eiff and the combination of the **admission** and **Al-Shihabi** are from the same field of endeavor, management of risk. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of the **admission** and **Al-Shihabi** by presenting an error list of errors associated with the verb used in describing the human activity as taught by Eiff for the benefit of real-time assessment of "at-risk" worker behaviors and operational safety levels (Eiff p5) to identify the most common sources of error and to trend the safety level over time to show progress (Eiff p7) and also to keep workers & management focused on safety, reduce equipment damage and personal injuries, and improve productivity (Eiff p14) and to promote targeted interventions (Eiff p5).

Claim Rejections - 35 USC § 103

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art in the "Background of the Invention" in the specification of the instant application (page 2 line 1 – page 2 line 18), hereinafter referred to as the **admission**, in view of **Al-Shihabi** ("A Framework for Modeling Human-like Driving Behaviors for Autonomous Vehicles in Driving Simulators"), further in view of **Luxhøj** ("Risk Analysis of Human Performance in Aviation Maintenance").

Claim 6:

325 The combination of the **admission** and **Al-Shihabi** fails to explicitly teach:

- Quantifying the likelihoods and the potential severity.

Luxhøj teaches:

- Wherein calculating the risk of potential harm further comprises quantifying the likelihood of occurrence of the error, quantifying the likelihood of correction of the human error, quantifying the likelihood of the effect of the error, and quantifying the potential severity of the effect of the error (p1-8 especially "probability of an event occurrence times the severity of that event...this purely quantitative" p1 and "probabilities

quantitatively define the contribution to System Risk" p3; *Thus, it would be obvious that in order to mathematically consider the likelihoods and the severity, one must quantify these entities).*

Motivation:

335 **Luxhøj** and the combination of the **admission** and **Al-Shihabi** are from the same field of endeavor, management of risk. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of the **admission** and **Al-Shihabi** by quantifying the likelihoods and the potential severity as taught by **Luxhøj** for the benefit of understanding the complex interrelationships amount various causal factors in a potential accident chain (**Luxhøj** p3) since proper

340 human performance could act as a strong defense against the combination of poor quality of maintenance procedures and improper compliance with maintenance procedures, significantly reducing the relative probability of structural failure (**Luxhøj** p7).

Conclusion

345 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Bieda (US Patent Application Publication No. 2003/0171897)
- Rose (US Patent Application Publication No. 2005/0021314)
- Shrader-Frechette ("Technological Risk and Small Probabilities")
- Kanki ("Current Approaches to Assessing Risk in Maintenance and Inspection")
- 350 - Johnson ("Human Factors Programs: Fact or Fantasy?")
- Bongard ("Maintenance Error Management through MEDA")

Claims 1-18 are rejected.

355 ***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin J. Buss whose telephone number is 571-272-5831. The examiner can normally be reached on M-F 9AM-5PM.

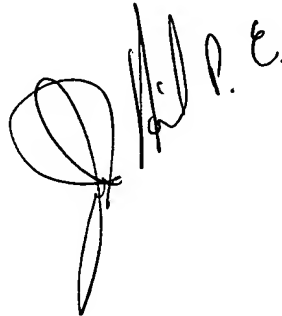
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360 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent
can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding
is assigned is 571-273-8300.

365 Information regarding the status of an application may be obtained from the Patent Application Information
Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or
Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more
information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the
Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin J Buss
Examiner
Art Unit 2129

BJB

A handwritten signature in black ink, appearing to read "B. J. Buss", with a large, stylized loop on the left side.